

**SMART-L** Multi Mission (MM/F), is a next generation Long Range Multi Mission Radar for Air and Space Surveillance and Ballistic Missile Detection. The fully digitally controlled Active Electronically Scanned Array (AESA) type of radar, applying GaN transmitter and Dual Axis Multibeam receiver technology, is capable of detecting a very wide variety of air and space objects including stealth, short up to long range ballistic missiles and space objects. The applied high-end techniques result in a radar with an unrivalled long range performance of up to 2000 km.

### 3D LONG RANGE AIR, SPACE AND MISSILE DEFENSE RADAR

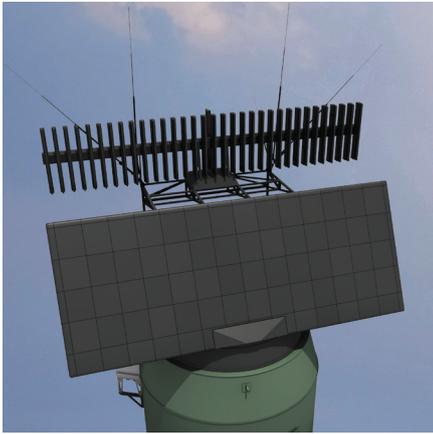
- Simultaneous multi mission mode and multi function
- Unrivalled long range performance
- Autonomous Ballistic Missile Search and Track capabilities
- Easily upgradable



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### SIMULTANEOUS MULTI MISSION MODE AND MULTI FUNCTIONS

The SMART-L MM/F combines Air Defence (AD) and Ballistic Missile (BM) defence in one mode by adaptable radar wave-forms for the various tasks in a single rotation.

### UNRIVALLED LONG RANGE PERFORMANCE

The unique and patented extended long range waveform and matched processing and flexible scan time results in very long range performance. It covers an instrumented range of maximum 2000 km against space objects and ballistic missile targets.

### AUTONOMOUS BALLISTIC MISSILE SEARCH AND TRACK CAPABILITIES

SMART-L MM/F independently finds Ballistic Missile type targets. Following fast track initiation, the ballistic target track is maintained up to zenith. The Ballistic Missile defence capability is based on the extended long range waveform functionality proven during various live ballistic missile trails. Thanks to AESA, Ballistic Missile detection range is even improved significantly by applying forward/backward scanning and staring modes.

### EASILY UPGRADABLE AND PREPARED FOR FUTURE

In traditional radar systems the functionality remains unchanged through its lifespan. However SMART-L MM/F is an AESA programmable radar which is characterized by full flexibility. Additional capabilities (like Space Situational Awareness) can be introduced during lifetime according to customer needs. This makes the radar future proof in case of evolving requirements.

### MAIN FEATURES

- Characteristics
  - D-band AESA and GaN technology
  - Dual axis multi-beam with instantaneous mono-pulse accuracy in azimuth and elevation
  - Extended Long Range waveform and processing
  - Instantaneous Doppler processing for the full range, azimuth and elevation coverage
  - Proven BM detection capability

- Wide elevation (up to zenith) coverage
- Fast track initiation and active tracking
- Dedicated Electronic Protective Measures technique
- Multipath suppression
- Windmill Mitigation
- Lightning protection
- Interoperability
  - AIR Command and Control Compliant: e.g. ASTERIX, MIL-ASTERIX, AWCIES
- SSR Characteristics: 3 Channel Mk XII IFF
  - Modes 1, 2, 3/A, C, NATO Secure Mode 4
  - Mode 5 level 1 & 2 and Mode S level 1 & 2
- Strategic transportable
- Status: under contract

Technical Data	
Air Defence range	480 km instrumented
Ballistic Missile range	Up to 2000 km instrumented
Minimum range	5 km
Tracking capacity	2000 tracks

Antenna	
Frequency band	D-band
Update rate	5 s or shorter (in staring mode)
IFF antenna	Integrated and fit for mode 5 and S Low Vertical Aperture 3-channel IFF antenna
Maintainability	Easy, standard building blocks, from inside the antenna accessible
Antenna	9 tons